STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0025151
Owner:	Metropolitan St. Louis Sewer District
Address:	2350 Market Street, St. Louis, MO 63103
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	MSD, Lemay WWTP
Address:	201 Hoffmeister Avenue, St. Louis, MO 63125
Legal Description:	NW SE Sec. 19 (projected), T44N, R7E, St. Louis County
Receiving Stream:	Mississippi River (P)
First Classified Stream and ID:	Mississippi River (P) (1707)
USGS Basin & Sub-watershed No.:	07140101 – 070004

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – POTW - SIC #4952
Activated sludge/sludge filter press/sludge incineration/incinerator ash landfill
Design population equivalent is 1,670,000
Design flow is 167 million gallons per day (MGD).
Actual flow is 114 million gallons per day.
Design sludge production is 73,000 dry tons/year.
Actual sludge production is 34,600 dry tons/year.
(continued on page 2)

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

December 30, 2005 — Effective Date
January 27, 2006 — Revised Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

December 29, 2010 — Expiration Date

Edward Galbraith, Director of Staff, Clean Water Commission

FACILITY DESCRIPTION (continued)

Outfall #002 – POTW - SIC #4952
Ash slurry ponds/incinerator ash landfill

Actual flow is 1.8 MGD

Outfall #003, #004, #005, #006, and #007 – Storm water runoff

The Lemay Wastewater Treatment Plant is an activated sludge secondary treatment plant consisting of four detritus tanks, five comminutors, two pre-aeration tanks, eight primary clarifiers, eight step-feed aeration tanks, twelve final clarifiers, three ash slurry ponds, five stormwater outfalls, and solids handling facilities which include sludge dewatering belt filter presses and multiple hearth incinerators.

PERMIT NUMBER MO-0025151

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Influent						
Biochemical Oxygen Demand	mg/L			***	once/week	24 hr. comp.
Total Suspended Solids	mg/L			***	once/week	24 hr. comp.
Effluent						
Flow	MGD	*		*	once/day	24 hr. total
Biochemical Oxygen Demand***	mg/L		45	30	once/weekday	24 hr. comp.
Total Suspended Solids***	mg/L		45	30	once/weekday	24 hr. comp.
pH – Units	SU	**		**	once/weekday	grab
Temperature	°F	*		*	once/weekday	grab
Oil and Grease	mg/L	15		10	once/week	grab
Ammonia Nitrogen as N	mg/L	Note 1		Note 1	once/month	24 hr. comp.
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE February 28, 2006 .						
Arsenic, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Cadmium, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Chromium, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Copper, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Lead, Total Recoverable	µg/L	657		199	once/quarter******	24 hr. comp.
Mercury, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Nickel, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Silver, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Zinc, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter******	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter******	24 hr. comp.
Total Phosphorus as P	mg/L	*		*	once/quarter******	24 hr. comp.
Nitrite & Nitrate	mg/L	*		*	once/quarter******	24 hr. comp.
Total Nitrogen as N	mg/L	*		*	once/quarter******	24 hr. comp.
Hardness	mg/L	*		*	once/quarter******	24 hr. comp.

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2006 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #002						
Flow	MGD	*		*	once/week	24 hr. total
Biochemical Oxygen Demand*****	mg/L		45	30	once/week	grab
Total Suspended Solids*****	mg/L		90	65	once/week	grab
pH – Units	SU	****		****	once/week	grab
Temperature	°F	*		*	once/week	grab
Oil and Grease	mg/L	15		10	once/month	grab
Ammonia Nitrogen as N	mg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE February 28, 2006 .						
Arsenic, Total Recoverable	µg/L	*		*	once/quarter******	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter******	grab
Chromium, Total Recoverable	µg/L	*		*	once/quarter******	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter******	grab
Lead, Total Recoverable	µg/L	657		243	once/quarter******	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter******	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter******	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter******	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter******	grab
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter******	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter******	grab
Total Phosphorus as P	mg/L	*		*	once/quarter******	grab
Nitrite & Nitrate	mg/L	*		*	once/quarter******	grab
Total Nitrogen as N	mg/L	*		*	once/quarter******	grab
Hardness	mg/L	*		*	once/quarter******	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2006 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Whole Effluent Toxicity (WET) Test (AEC – 22.8 %)	% Survival	See Special Conditions			twice/year in January & July	24 hr. composite
LC50	%	<76				
Outfall #002						
Whole Effluent Toxicity (WET) Test (AEC - 10%)	% Survival	See Special Conditions			once/year in January	grab
LC50	%	<33				
MONITORING REPORTS SHALL BE SUBMITTED SEMI-ANNUALLY; THE FIRST REPORT IS DUE April 28, 2006 .						
Outfalls #001 & #002						
Total Toxic Organics (Note 2)	mg/L	*			once/year in July	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE October 28, 2006 .						
Outfalls #003 - #007						
Flow	MGD	*		*	once/quarter******	instantaneous estimate
Rainfall	inches	*		*	once/quarter******	total
Biochemical Oxygen Demand$_5$	mg/L	*		*	once/quarter******	grab
pH – Units	SU	**		**	once/quarter******	grab
Oil & Grease	mg/L	15		10	once/quarter******	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter******	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2006 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

*** This facility is required to meet a removal efficiency of 85% or more. If the permittee can document an alternate removal efficiency during wet weather, then that removal efficiency can be considered for wet weather flows.

**** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.

***** This facility is required to meet a removal efficiency of 65% or more.

****** Once per quarter in the months of January, April, July, and October.

Note 1 – Final daily maximum ammonia limits are as follows, based on concurrent Mississippi River stream flow as measured at St. Louis by US Geological Survey.
- 50 mg/L (stream flow less than 83,600 cfs)
- 80 mg/L (stream flow more than 83,600 cfs)

Note 2 – See Total Toxic Organics page.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective three (3) years from the date of issuance of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Influent						
Biochemical Oxygen Demand	mg/L			***	once/week	24 hr. comp.
Total Suspended Solids	mg/L			***	once/week	24 hr. comp.
Effluent						
Flow	MGD	*		*	once/day	24 hr. total
Biochemical Oxygen Demand***	mg/L		45	30	once/weekday	24 hr. comp.
Total Suspended Solids***	mg/L		45	30	once/weekday	24 hr. comp.
pH – Units	SU	**		**	once/weekday	grab
Temperature	°F	*		*	once/weekday	grab
Oil and Grease	mg/L	15		10	once/week	grab
Ammonia Nitrogen as N					twice/week	24 hr. comp.
(May – October)	mg/L	38.8		23.3		
	lbs/day	42,714		25,651		
(November – April)	mg/L	77.9		46.6		
	lb/day	85,759		51,301		
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE February 28, 2006 .						
Arsenic, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Cadmium, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Chromium, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Copper, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Lead, Total Recoverable	µg/L	657		199	once/quarter******	24 hr. comp.
Mercury, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Nickel, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Silver, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Zinc, Total Recoverable	µg/L	*		*	once/quarter******	24 hr. comp.
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter******	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter******	24 hr. comp.
Total Phosphorus as P	mg/L	*		*	once/quarter******	24 hr. comp.
Nitrite & Nitrate	mg/L	*		*	once/quarter******	24 hr. comp.
Total Nitrogen as N	mg/L	*		*	once/quarter******	24 hr. comp.
Hardness	mg/L	*		*	once/quarter******	24 hr. comp.

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2006 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

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PERMIT NUMBER MO-0025151

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #002						
Flow	MGD	*		*	once/week	24 hr. total
Biochemical Oxygen Demand*****	mg/L		45	30	once/week	grab
Total Suspended Solids*****	mg/L		90	65	once/week	grab
pH – Units	SU	****		****	once/week	grab
Temperature	°F	*		*	once/week	grab
Oil and Grease	mg/L	15		10	once/month	grab
Ammonia Nitrogen as N					once/week	grab
(May – October)	mg/L	33.1		21.9		
	lbs/day	497		329		
(November – April)	mg/L	71.1		47.1		
	lb/day	1067		707		
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE February 28, 2006 .						
Arsenic, Total Recoverable	µg/L	*		*	once/quarter******	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter******	grab
Chromium, Total Recoverable	µg/L	*		*	once/quarter******	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter******	grab
Lead, Total Recoverable	µg/L	657		243	once/quarter******	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter******	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter******	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter******	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter******	grab
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter******	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter******	grab
Total Phosphorus as P	mg/L	*		*	once/quarter******	grab
Nitrite & Nitrate	mg/L	*		*	once/quarter******	grab
Total Nitrogen as N	mg/L	*		*	once/quarter******	grab
Hardness	mg/L	*		*	once/quarter******	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2006 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Whole Effluent Toxicity (WET) Test (AEC - 22.8%)	% Survival	See Special Conditions			twice/year in January & July	24 hr. composite
LC50	%	<76				
Outfall #002						
Whole Effluent Toxicity (WET) Test (AEC - 10%)	% Survival	See Special Conditions			Once/year in January	grab
LC50	%	<33				
MONITORING REPORTS SHALL BE SUBMITTED SEMI-ANNUALLY; THE FIRST REPORT IS DUE April 28, 2006 .						
Outfalls #001 & #002						
Total Toxic Organics (Note 2)	mg/L	*			once/year in July	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE October 28, 2006 .						
Outfalls #003 - #007						
Flow	MGD	*		*	once/quarter******	instantaneous estimate
Rainfall	inches	*		*	once/quarter******	total
Biochemical Oxygen Demand$_5$	mg/L	*		*	once/quarter******	grab
pH – Units	SU	**		**	once/quarter******	grab
Oil & Grease	mg/L	15		10	once/quarter******	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter******	grab
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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

*** This facility is required to meet a removal efficiency of 85% or more. If the permittee can document an alternate removal efficiency during wet weather, then that removal efficiency can be considered for wet weather flows.

**** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.

***** This facility is required to meet a removal efficiency of 65% or more.

****** Once per quarter in the months of January, April, July, and October.

Note 2 – See Total Toxic Organics page.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Report as no-discharge when a discharge does not occur during the report period.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established in Part A of the permit by the Director.
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
   (c) That the effluent limit established in part A of the permit will be exceeded.

5. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
   (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
   (b) Permittee is authorized to land apply biosolids, to use biosolids in mine reclamation projects, to compost biosolids, to landfill biosolids, or to use other DNR approved methods for disposal. Permit Standard Conditions, Part III shall apply to the land application of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

6. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;

C. SPECIAL CONDITIONS (continued)
6. Water Quality Standards (continued)

(7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
(8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Permittee shall implement and enforce its approved pretreatment program in accordance with the requirements of 40 CFR Part 403. The approved pretreatment program is hereby incorporated by reference.

Permittee shall submit to the Department on or before September 30 of each year a report briefly describing its pretreatment activities during the previous calendar year. At a minimum, the report shall include the following:
(a) An updated list of the Permittee's Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Permittee shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The Permittee shall also list the Industrial Users that are subject only to local Requirements;
(b) A summary of the status of Industrial User compliance over the reporting period;
(c) A summary of compliance and enforcement activities (including inspections) conducted by the Permittee during the reporting period; and
(d) Any other relevant information requested by the Department.

8. As required in 40 CFR 122.21 (j)(4) the permittee shall, as part of its renewal application for this permit, submit to the department a written technical evaluation of the need to revise local limits under 40 CFR 403.5 (c)(1).

9. All involved personnel shall be trained in material handling and storage, and housekeeping of maintenance area. Upon request, proof of training shall be submitted to the Department.

10. All paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) shall be stored so that these materials are not exposed to storm water. Spill prevention, control, and/or management shall be provided sufficient to prevent any spills of these pollutants from entering a water of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.

11. Good housekeeping practices shall be maintained on the site to keep solid waste from entry into waters of the state.

12. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.

13. Substances, regulated by federal law under the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), that are transported, stored, or used for maintenance, cleaning or repair, shall be managed according to RCRA and CERCLA.

14. Sewer Extension
The department has approved the construction permit program to regulate and approve construction of sanitary sewers which are tributary to this wastewater treatment plant. This approval may be modified or revoked by the department prior to the sewage collection, transportation, or treatment facilities reaching their design limitations, if the facility falls into chronic noncompliance with the permit, or if the permittee fails to follow the terms and conditions of the submitted and approved program.

This permit may be reopened and modified or alternatively revoked and reissued to incorporate new or modified conditions to the sewer construction permit authority, if information indicates changes are necessary to assure compliance with Missouri's Clean Water Law and associated regulations.

C. SPECIAL CONDITIONS (continued)

14. Sewer Extension (continued)

When any of the above mentioned conditions occur, the permittee will be notified prior to any modification of this permit condition.

Plans and specifications for all projects which include a proposed bypass must be submitted to the Department to provide record information for location and size of the by-pass.

An annual report on the sewer extension program must be submitted by January 28 of each year to the Missouri Department of Natural Resources St. Louis Regional Office. The report must list the name of the projects approved and the length of sewers and force mains and the capacity of lift stations constructed under the sewer extension program. A summary of total flow at the treatment facility shall be included. Detailed project information and data including design flows and inspection records shall be available for review upon request.

15. An individual shall be designated by the permittee as responsible for environmental matters. A stormwater pollution prevention plan shall be implemented. The plan shall be reviewed and updated as needed, and submitted with the application for operating permit renewal.

16. Nine Minimum Controls

The permittee will implement the Nine Minimum Controls as specified by the U.S. EPA Combined Sewer Overflow (CSO) Policy dated April 19, 1994, (59 FR 18688):

Control 1 – Proper Operation and Maintenance Programs;

Control 2 – Maximum Use of the Collection System for Storage;

Control 3 – Review and Modification of Pretreatment Requirements;

Control 4 – Maximization of Flow to the POTW for Treatment;

Control 5 – Dry Weather Flows from CSO's are prohibited;

Control 6 – Control of Solid and Floatable Materials in CSO's;

Control 7 – Pollution Prevention;

Control 8 – Public Notification;

Control 9 – Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls.

17. The permittee is authorized to discharge from the Combined Sewer Overflow (CSO) outfalls identified in Attachment A. New outfalls may be added by the permittee by applying for modification of the permit.

18. Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF WET TESTING FOR THIS PERMIT				
OUTFALL	A.E.C. %	FREQUENCY	SAMPLE TYPE	MONTHS
001	22.8	Twice/year	24 hr composite	January & July
002	10	Once/year	grab	January

C. SPECIAL CONDITIONS (continued)

18. Whole Effluent Toxicity (WET) tests shall be conducted as follows: (continued)

(a) Test Schedule and Follow-Up Requirements

(1) Perform a MULTIPLE-dilution test in the months and at the frequency specified above. For tests which are successfully passed, submit test results USING THE DEPARTMENT'S WET TEST REPORT FORM #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.

(a) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.

(b) Samples submitted for analysis of stormwater discharges shall be collected as a grab.

(c) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation.

(d) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.

(e) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.

(f) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.

(g) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.

(h) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.

(i) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.

(j) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.

(k) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.

(l) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.

(m) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.

(2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

(3) If the effluent fails the test, a multiple dilution test shall be performed within 30 calendar days and biweekly thereafter, until one of the following conditions are met:

(a) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.

(b) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(4) Failure of at least two multiple-dilution tests during any period of accelerated monitoring violates the permit narrative requirement for aquatic life protection.

(5) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

C. SPECIAL CONDITIONS (continued)

18. Whole Effluent Toxicity (WET) tests shall be conducted as follows: (continued)

(6) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

(7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.

(8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.

(9) When WET test sampling is required to run over one DMR period, each DMR report shall contain A COPY OF THE DEPARTMENT'S WET TEST REPORT FORM THAT WAS generated during the reporting period.

(10) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) PASS/FAIL procedure and effluent limitations:

(1) To pass a multiple-dilution test:

(a) FOR FACILITIES WITH A computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC), OF 30% OR LESS THE AEC must be less than three-tenths (0.3) of the LC_{50} concentration for the most sensitive of the test organisms; **OR**,

(b) (FOR FACILITIES WITH AN AEC GREATER THAN 30% THE LC50 CONCENTRATION MUST BE GREATER THAN 100%; **AND**,

(c) all EFFLUENT CONCENTRATIONS equal to or LESS THAN the AEC must be nontoxic. MORTALITY OBSERVED IN ALL EFFLUENT CONCENTRATIONS EQUAL TO OR LESS THAN THE AEC SHALL NOT BE SIGNIFICANTLY DIFFERENT (AT THE 95% CONFIDENCE LEVEL; P = 0.05) THAN THAT OBSERVED IN THE UPSTREAM RECEIVING-WATER CONTROL SAMPLE. WHERE UPSTREAM RECEIVING WATER IS NOT AVAILABLE MORTALITY OBSERVED IN THE AEC TEST CONCENTRATION SHALL NOT BE SIGNIFICANTLY DIFFERENT (AT THE 95% CONFIDENCE LEVEL; P = 0.05) THAN THAT OBSERVED IN THE LABORATORY CONTROL. THE APPROPRIATE STATISTICAL TESTS OF SIGNIFICANCE SHALL BE CONSISTENT WITH THE MOST CURRENT EDITION OF METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS OR OTHER FEDERAL GUIDELINES AS APPROPRIATE OR REQUIRED. FAILURE OF ONE MULTIPLE-DILUTION TEST MAY BE CONSIDERED AN EFFLUENT LIMIT VIOLATION.

(c) Test Conditions

(1) Test Type: Acute Static non-renewal

(2) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

(3) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.

(4) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.

(5) Multiple-dilution tests will be run with:

(a) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;

(b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and

(c) reconstituted water.

(6) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.

(7) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

C. SPECIAL CONDITIONS (continued)

19. Due to the nature of concentrated industrial inputs and the suppression of nitrification in the MSD, Lemay treatment system, all BOD samples should be seeded as per the Standard Methods for the Examination of Water and Wastewater, prior to testing to assure a population of microorganisims capable of oxidizing the biodegradable organic matter in the sample.

D. SCHEDULE OF COMPLIANCE

1. The permittee shall submit a revised Long Term Control Plan (LTCP) consistent with the U.S. EPA CSO Policy dated April 19, 1994, (59 FR 18688) by August 17, 2006.

2. The permittee shall submit annual reports to document implementation of the Nine Minimum Controls. The reports will be due November 30 of each year.

SUMMARY OF TEST METHODOLOGY FOR WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,

Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test acceptability criterion:	90% or greater survival in controls

Test conditions for (Pimephales promelas):

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test Acceptability criterion:	90% or greater survival in controls

Total Toxic Organics (Note 1)

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon Tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-trichlorobenzene
Hexachlorobenzene
1,2-dichloroethane
1,1,1-trichloroethane
Hexachloroethane
1,1-dichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
Chloroethane
Bis (2-chloroethyl) ether
2-chloroethyl vinyl ether
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis (2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate

Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-benzanthracene (benzo(a)anthracene)
Benzo(a)pyrene (3,4-benzopyrene)
3,4-benzofluoranthene (benzo(b)fluoranthene)
11,12-benzofluoranthene (benzo(k)fluoranthene)
Chrysene
Anthracene
1,12-benzoperylene (benzo(ghi)perylene)
Fluorene
2-chloronaphthalene
2,4,6-trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-chlorophenol
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichorobenzene
3,3-dichlorobenzidine
1,1-dichloroethylene
1,2-trans-dichloroethylene
2,4-dichlorophenol
1,2-dichloropropane (1,3-dichloropropane)
2,4-dimethylphenol
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Ethylbenzene
Fluoranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis (2-chloroisopropyl) ether
Bis (2-chloroethoxy) methane
Methylene Chloride (dichloromethane)
Methyl Chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromemethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dintro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
Phenanthrene
1,2,5,6-dibenzanthracene (dibenzo(a,h)anthracene)
Indeno (1,2,3-cd) pyrene
(2,3-o-phenylene pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl Chloride (chloroethylene)
Aldrin
Dieldrin
Chlordane (technical mixture and metabolites)
4,4-DDT
4,4-DDE (p,p-DDX)
4,4-DDD (p,p-TDE)
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide (BHC hexachlorocyclohexane)
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC (PCB polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene

ATTACHMENT A

CSO OUTFALL LOCATIONS

Outfall	Size (W x H)	Receiving Water	Elevation	Longitude	Latitude
008	60 inch	Lower River Des Peres (P)	392.93	90° 16' 13"	38° 32' 40"
009	48 inch	Lower River Des Peres (C)	397.62	90° 16' 18"	38° 33' 0"
010	three 68 x 167 inch	Lower River Des Peres (C)	390.58	90° 16' 15"	38° 33' 5"
011	72 x 72 inch	Lower River Des Peres (C)	398.15	90° 16' 25"	38° 33' 23"
012	42 inch	Lower River Des Peres (C)	403.46	90° 16' 46"	38° 33' 26"
013	78 inch	Lower River Des Peres (C)	393.32	90° 16' 40"	38° 33' 22"
014	48 inch	Lower River Des Peres (C)	404.84	90° 16' 55"	38° 33' 33"
015	three 68 x 120 inch	Rock Creek	404.30	90° 16' 51"	38° 34' 1"
016	24 inch	Rock Creek	408.55	90° 17' 4"	38° 33' 50"
017	42 inch	Lower River Des Peres	409.88	90° 17' 2"	38° 33' 35"
018	36 inch	Lower River Des Peres	403.77	90° 17' 16"	38° 33' 41"
019	30 inch	Lower River Des Peres	399.89	90° 17' 35"	38° 33' 44"
020	36 inch	Lower River Des Peres	398.73	90° 17' 35"	38° 33' 42"
021	60 inch	Lower River Des Peres	407.95	90° 17' 41"	38° 33' 49"
022	60 inch	Lower River Des Peres	405.05	90° 17' 46"	38° 33' 53"
023	three 68 x 168 inch	Lower River Des Peres	401.06	90° 18' 18"	38° 34' 20"
024	108 x 36 inch	Lower River Des Peres	412.26	90° 18' 40"	38° 34' 44"
025	48 inch	Lower River Des Peres	408.54	90° 18' 34"	38° 34' 44"
026	42 inch	Lower River Des Peres	416.81	90° 18' 42"	38° 35' 4"
027	156 x 61 inch	Lower River Des Peres	417.23	90° 18' 39"	38° 35' 3"
028	42 inch	Lower River Des Peres	416.93	90° 18' 50"	38° 35' 18"
029	78 inch	Lower River Des Peres	413.80	90° 19' 1"	38° 35' 30"
030	54 x 59 inch	Lower River Des Peres	420.00	90° 19' 5"	38° 35' 51"
031	30 inch	Lower River Des Peres	421.68	90° 18' 57"	38° 35' 57"
032	84 x 40 inch	Middle River Des Peres	409.50	90° 19' 8"	38° 35' 50"
036	36 inch	Middle River Des Peres	415.22	90° 18' 49"	38° 36' 26"
037	48 x 48 inch	Middle River Des Peres	422.34	90° 18' 37"	38° 36' 27"
039	84 inch	Middle River Des Peres	418.30	90° 18' 32"	38° 36' 32"
041	two 36 x 48 inch	Middle River Des Peres	414.75	90° 18' 37"	38° 36' 28"
042	two 48 x 84 inch	Middle River Des Peres	419.25	90° 18' 29"	38° 36' 35"
043	two 108 x 72 inch	Middle River Des Peres	418.00	90° 18' 29"	38° 36' 36"
044	48 x 48 inch	Middle River Des Peres	427.69	90° 18' 13"	38° 36' 48"
046	15 inch	Middle River Des Peres	426.70	90° 18' 8"	38° 36' 54"
048	two 36 x 54 inch	Middle River Des Peres	431.08	90° 17' 56"	38° 37' 0"
049	15 inch	Middle River Des Peres	440.80	90° 17' 54"	38° 37' 2"
050	108 x 84 inch	Middle River Des Peres	435.15	90° 17' 48"	38° 37' 12"
052	two 48 x 84 inch	Middle River Des Peres	433.17	90° 17' 31"	38° 37' 17"
053	84 inch	Middle River Des Peres	439.13	90° 17' 12"	38° 37' 18"
054	60 x 66 inch	Middle River Des Peres	430.74	90° 17' 14"	38° 37' 16"
057	two 48 x 100 inch	Middle River Des Peres	433.01	90° 16' 50"	38° 37' 19"
058	108 x 74 inch	Middle River Des Peres	432.88	90° 16' 50"	38° 37' 19"
060	27 inch	Middle River Des Peres	440.00	90° 16' 45"	38° 37' 19"
061	30 inch	Middle River Des Peres	443.89	90° 16' 33"	38° 37' 19"
062	21 inch	Middle River Des Peres	440.80	90° 16' 31"	38° 37' 20"
063	two 29-ft and one 16-ft horseshoes	Middle River Des Peres	427.29	90° 16' 19"	38° 37' 20"
064	30 inch	Upper River Des Peres	480.65	90° 18' 23"	38° 39' 48"
065	12 inch	Upper River Des Peres	480.00	90° 18' 24"	38° 39' 52"
066	21 inch	Upper River Des Peres	480.00	90° 18' 24"	38° 39' 59"
067	30 inch	Upper River Des Peres	480.00	90° 18' 23"	38° 40' 1"
068	36 inch	Upper River Des Peres	480.00	90° 18' 23"	38° 40' 1"
069	21 inch	Upper River Des Peres	493.24	90° 18' 28"	38° 40' 7"
070	33 inch	Upper River Des Peres	491.51	90° 18' 29"	38° 40' 8"
071	24 inch	Upper River Des Peres	496.51	90° 18' 35"	38° 40' 15"
072	42 x 52 inch	Upper River Des Peres	495.38	90° 18' 35"	38° 40' 15"
073	18 inch	Upper River Des Peres	496.88	90° 18' 42"	38° 40' 16"
074	24 inch	Upper River Des Peres	495.34	90° 18' 37"	38° 40' 15"
075	24 inch	Upper River Des Peres	499.29	90° 18' 43"	38° 40' 19"
076	21 inch	Upper River Des Peres	498.72	90° 18' 44"	38° 40' 21"
077	30 inch	Upper River Des Peres	507.08	90° 18' 53"	38° 40' 34"
078	27 inch	Upper River Des Peres	485.93	90° 18' 40"	38° 39' 43"
079	72 inch	Upper River Des Peres	486.62	90° 18' 55"	38° 39' 45"
080	24 inch	Upper River Des Peres	486.90	90° 18' 53"	38° 39' 44"
081	66 inch	Upper River Des Peres	486.44	90° 18' 57"	38° 39' 45"
082	42 inch	Upper River Des Peres	486.95	90° 18' 56"	38° 39' 45"
083	72 inch	Upper River Des Peres	492.75	90° 19' 24"	38° 40' 5"
084	78 inch	Upper River Des Peres	497.59	90° 19' 16"	38° 39' 49"
085	60 inch	Upper River Des Peres	494.37	90° 19' 25"	38° 40' 6"

ATTACHMENT A

CSO OUTFALL LOCATIONS

Outfall	Size (W x H)	Receiving Water	Elevation	Longitude	Latitude
086	84 x 120 inch	Upper River Des Peres	498.43	90° 19' 31"	38° 40' 14"
087	18 inch	Upper River Des Peres	494.30	90° 19' 25"	38° 40' 5"
088	24 inch	Upper River Des Peres	509.02	90° 19' 48"	38° 39' 59"
089	36 inch	Upper River Des Peres	504.64	90° 19' 59"	38° 39' 59"
090	30 inch	Upper River Des Peres	516.95	90° 20' 13"	38° 39' 46"
091	72 inch	Upper River Des Peres	512.94	90° 20' 13"	38° 39' 46"
092	120 x 70 inch	Upper River Des Peres	512.69	90° 20' 13"	38° 39' 47"
093	27 inch	Upper River Des Peres	508.45	90° 20' 9"	38° 40' 1"
094	27 inch	Upper River Des Peres	513.17	90° 20' 13"	38° 40' 1"
095	30 inch	Upper River Des Peres	515.50	90° 20' 17"	38° 40' 3"
096	36 inch	Upper River Des Peres	506.71	90° 20' 20"	38° 40' 7"
099	36 inch	Upper River Des Peres	516.14	90° 20' 32"	38° 40' 24"
100	27 inch	Upper River Des Peres	527.26	90° 20' 37"	38° 40' 44"
101	33 inch	Upper River Des Peres	536.00	90° 20' 34"	38° 40' 51"
102	72 x 72 inch	Upper River Des Peres	550.02	90° 21' 34"	38° 40' 22"
103	two 72 x 72 inch	Deer Creek	413.52	90° 19' 0"	38° 36' 3"
104	55 x 65 inch	Deer Creek	420.03	90° 19' 31"	38° 36' 3"
105	42 inch	Deer Creek	418.13	90° 19' 55"	38° 36' 12"
106	96 x 60 inch	Deer Creek	434.93	90° 20' 45"	38° 36' 40"
107	36 inch	Deer Creek (sink hole)	475.04	90° 21' 43"	38° 37' 10"
108	18 inch	Deer Creek	486.00	90° 23' 15"	38° 38' 3"
110	30 inch	Black Creek	476.97	90° 21' 18"	38° 37' 39"
111	84 inch	Black Creek	456.00	90° 20' 45"	38° 37' 49"
112	42 inch	Black Creek	485.60	90° 21' 42"	38° 37' 54"
113	60 inch	Black Creek	486.00	90° 20' 54"	38° 38' 9"
114	15 inch	Black Creek	481.82	90° 20' 58"	38° 38' 19"
115	30 inch	Black Creek	481.69	90° 21' 6"	38° 38' 34"
116	24 inch	Black Creek	524.89	90° 21' 53"	38° 39' 7"
117	42 inch	Black Creek	425.46	90° 20' 2"	38° 36' 45"
118	48 inch	Hampton Creek	437.66	90° 19' 49"	38° 37' 0"
119	27 inch	Hampton Creek	438.75	90° 19' 47"	38° 37' 2"
120	18 inch	Hampton Creek	446.87	90° 19' 41"	38° 37' 13"
121	66 inch	Hampton Creek	445.98	90° 19' 41"	38° 37' 13"
122	24 inch	Claytonia Creek	454.79	90° 19' 36"	38° 37' 22"
123	24 inch	Claytonia Creek	457.67	90° 19' 33"	38° 37' 25"
124	54 inch	Claytonia Creek	458.49	90° 19' 27"	38° 37' 30"
125	30 inch	Claytonia Creek	462.55	90° 19' 26"	38° 37' 33"
126	30 inch	Claytonia Creek	470.74	90° 19' 26"	38° 37' 40"
127	15 inch	Claytonia Creek	469.39	90° 19' 27"	38° 37' 40"
128	72 inch	Claytonia Creek	490.82	90° 19' 20"	38° 38' 0"
130	72 x 62 inch	Claytonia Creek	504.42	90° 19' 18"	38° 38' 6"
131	24 inch	Hampton Creek	458.86	90° 19' 47"	38° 37' 29"
134	30 inch	Hampton Creek	480.03	90° 19' 58"	38° 37' 48"
135	24 inch	Hampton Creek	485.00	90° 19' 59"	38° 37' 55"
136	48 inch	Hampton Creek	491.60	90° 19' 55"	38° 38' 6"
137	24 inch	Hampton Creek	484.79	90° 19' 59"	38° 37' 55"
138	18 inch	Hampton Creek	486.51	90° 19' 58"	38° 37' 58"
139	18 inch	Hampton Creek	510.39	90° 19' 55"	38° 38' 10"
140	15 inch	Hampton Creek	498.30	90° 19' 55"	38° 38' 10"
141	72 x 72 inch	Hampton Creek	499.18	90° 19' 56"	38° 38' 14"
142	two 72 x 96 inch	Mississippi River	391.59	90° 14' 36"	38° 33' 29"
143	60 inch	Mississippi River	387.99	90° 15' 0"	38° 32' 59"
144	48 inch	Mississippi River	388.95	90° 15' 9"	38° 32' 47"
147	108 inch	Mississippi River	371.27	90° 15' 31"	38° 32' 8"
149	36 inch	Mississippi River	390.00	90° 16' 18"	38° 30' 35"
151	33 inch	Mississippi River	389.00	90° 16' 30"	38° 30' 13"
152	58 x 58 inch CBX	Mississippi River	395.00	90° 16' 33"	38° 30' 5"
153	42 inch	Mississippi River	433.00	90° 16' 37"	38° 29' 51"
154	12 inch	Mississippi River	445.00	90° 16' 41"	38° 29' 31"
157	72 inch	Gravois Creek tributary	454.48	90° 17' 58"	38° 31' 0"
160	15 inch	Black Creek	529.11	90° 21' 41"	38° 38' 43"
161	36 inch	Deer Creek	463.00	90° 21' 48"	38° 36' 47"
163	72 x 48 inch	Lower River Des Peres	435.93	90° 18' 35"	38° 33' 46"
164	12 inch	Deer Creek tributary	502.53	90° 22' 0"	38° 37' 27"
165	15 inch	Deer Creek tributary	505.11	90° 21' 57"	38° 37' 27"
166	66 inch	Deer Creek	428.05	90° 19' 28"	38° 35' 57"
167	24 inch	Upper River Des Peres	498.82	90° 17' 48"	38° 40' 20"

ATTACHMENT A

CSO OUTFALL LOCATIONS

Outfall	Size (W x H)	Receiving Water	Elevation	Longitude	Latitude
168	48 inch	Lower River Des Peres	415.36	90° 18' 53"	38° 35' 18"
170	four 42 inch	Lower River Des Peres (P)	389.09	90° 16' 11"	38° 32' 34"
171	24 x 36 inch	Lower River Des Peres	408.00	90° 19' 6"	38° 35' 35"
172	24 x 36 inch	Lower River Des Peres	405.00	90° 18' 44"	38° 35' 10"
173	six 6 inch	Lower River Des Peres	410.00	90° 19' 9"	38° 35' 46"
174	12 inch	Black Creek	540.58	90° 21' 47"	38° 39' 2"
175	66 inch	Black Creek	463.00	90° 20' 55"	38° 37' 59"
176	15 inch	Hampton Creek	432.64	90° 19' 55"	38° 36' 51"
177	15 inch	Middle River Des Peres	440.00	90° 18' 12"	38° 36' 51"
178	18 inch	Upper River Des Peres	535.01	90° 18' 53"	38° 40' 38"
179	two 10' x 8' boxes (not active yet)	Mississippi River		90° 14' 25"	38° 33' 40"
180	24 inch	Upper River Des Peres	488.00	90° 18' 46"	38° 39' 43"